

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

- 1                   1-41. (Cancelled)
- 1                   42. (Currently amended) A method for determining whether a test colon cell  
2 has an ulcerative colitis (UC) or Crohn's disease (CD) phenotype, said method comprising:  
3                   (a) determining an expression level of each of the following genes in said test colon cell:  
4                   (i) a macrophage inflammatory protein-2 $\beta$  (GRO3) gene product in said test colon  
5 cell;  
6                   (b) determining an expression level of (ii) a neutrophil lipocalin (HNL) gene  
7 product in said test colon cell;  
8                   (e) determining an expression level of (iii) a macrophage elastase (MMP-12) gene  
9 product in said test colon cell;  
10                  (d) determining an expression level of (iv) an elastase specific inhibitor (elafin)  
11 gene product in said test colon cell; and  
12                  (e) determining an expression level of (v) a type VI collagen  $\alpha$ 3 chain (COL6A3)  
13 gene product in said test colon cell;  
14                  [(f)] (b) comparing the expression level of each of said gene products GRO3, HNL,  
15 MMP-12, elafin, and COL6A3 genes in said test colon cell to an expression level of the same  
16 gene product in a normal colon cell;  
17                  [(g)] (c) associating an increase in the expression level of said GRO3 gene product,  
18 said HNL gene product, said MMP-12 gene product, said elafin gene product, or said  
19 COL6A3 gene product each of said GRO3, HNL, MMP-12, elafin, and COL6A3 genes in said  
20 test colon cell relative to the expression level of the same gene product in said normal colon cell  
21 with a UC phenotype in said test colon cell; and

22        [(b)] (d) associating an increase in the expression level of each of said MMP-12 **gene**  
23 **product** or said and elafin **gene product genes** in said test colon cell relative to the expression  
24 level of the same gene **product** in said normal colon cell and a normal expression level of each  
25 of said GRO3, HNL, and COL6A3 genes with a CD phenotype in said test colon cell.

1                  43. (Canceled)

1                  44. (Canceled)

1                  45. (Currently amended) The method of claim 42, **comprising distinguishing**  
2 **between** wherein said method distinguishes a UC phenotype [[or]] from a CD phenotype in said  
3 test colon cell.

1                  46. (Currently amended) The method of claim 42, wherein said test colon cell  
2 has a UC phenotype when the expression level of **said GRO3 gene product** each of said GRO3,  
3 HNL, MMP-12, elafin, and COL6A3 genes in said test colon cell is increased relative to the  
4 expression level of the same gene **product** in said normal colon cell by at least a factor of two.

1                  47. (Previously presented) The method of claim 42, wherein said test colon  
2 cell is obtained from a needle biopsy core, a surgical resection sample, or a bowel sample.

1                  48. (Currently amended) The method of claim 42, wherein the expression  
2 level of said **gene products genes** is determined using Northern blot analysis, reverse  
3 transcription-polymerase chain reaction, in situ hybridization, or an array.

1                  49. (Currently amended) The method of claim 48, wherein said array  
2 comprises:

3                  (a) nucleic acid probes of 12-40 nucleotides in length, wherein said nucleic acid probes  
4 are complementary to said **gene products genes** and hybridize under high stringency conditions  
5 to said **gene products genes**; and

6                  (b) a substrate to which said nucleic acid probes are bound.

1               50. (Previously presented) The method of claim 49, wherein said substrate is  
2 selected from the group consisting of paper, membranes, filters, chips, pins, and glass.

1               51. (Previously presented) The method of claim 49, wherein said nucleic acid  
2 probes are bound to said substrate by covalent bonds or hydrophobic interactions.

1               52. (Previously presented) The method of claim 49, wherein said nucleic acid  
2 probes are spotted onto said substrate in a two-dimensional matrix or array.

1               53. (Canceled)

1               54. (Currently amended) The method of claim 42, wherein said test colon cell  
2 has a CD phenotype when the expression level of each of said MMP-12 gene product and elafin  
3 genes in said test colon cell is increased relative to the expression level of the same gene  
4 product in said normal colon cell by at least a factor of two and the expression level of each of  
5 said GRO3, HNL, and COL6A3 genes is normal.

1               55. (Canceled)

1               56. (Canceled)